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ABSTRACT OF THE DISCLOSURE

A recombinant expression vector capable of expressing and secreting an antibody fragment fused with *E. coli* thermostable enterotoxin signal sequence derivative or *E. coli* outer membrane protein A (Omp A) signal sequence in the form of a soluble heterozygote protein is used to mass-produce the antibody fragment by culturing a microorganism transformed with the expression vector in a medium and collecting the antibody fragment secreted from the transformed microorganism into the medium